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ABSTRACT

Several models for organizing methods of observing social interaction are presented in the form of dimensions along which researchers choose methods to fulfill particular research objectives. The setting dimension specifies whether the research will be done in the lab or in the field. The output dimension specifies the form which the data will take, relying on the definition of the "unit" of behavior. The content of interaction involves whether the cognitive-verbal or emotional or motoric levels of social interaction are observed, or some combination of these levels. The scope of observation ranges from great detail in description to enlarged interpretations of social interaction. A new scoring system known as SYMLOG (Bales and Cohen, 1973) is described and discussed as an integration of many levels of the content and scope dimensions. It is urged that research on social interaction be guided by the needs of solutions for social problems. (Author)

Observing Social Interaction:

Methodological Models

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This paper begins the author's efforts in the process of differentiation and integration of the many different methods used in observing social interaction.* It is a methodological study of the social scientific efforts to describe, explain, and predict the social behavior of human beings. We will present a series of organizational models for certain of the basic features of the methods used in this field. These models deal with several relatively independent dimensions of great importance for observing social interaction. The main thrust of this paper are the suggestions a.) that there be more awareness of the choices being made in a social psychological investigation of social interaction, b.) that these choices be made explicit, and c.) that research on the profile of social interaction of a particular personality or social setting use methods all along the continua presented in the following models. The ultimate goal is to develop a theoretical system of cognate variables where it is possible to relate conceptually observations and knowledge on one level to observations and knowledge on another level.

Setting. The first methodological dimension for a study of social interaction involves the setting of the study: whether observation is in the laboratory or in the field. In terms of the Lab setting, we can understand most social psychological research as the study of social interaction. But it seems from this corpus of research that, more than anything else, we know a lot about what happens in a short-term, fleeting encounter with strangers in a context of high authority, maximum suspicion, and distrust. The conclusions of these lab games are seldom, however, understood in these descriptive terms. They are rather understood in terms of concepts like "cooperation," "love," "altruism," and so on. The process whereby this abstraction occurs is operationalization. Thus, for example, "love" is operationalized by "mutual gazing," or the amount of time that a couple

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* For more comprehensive reviews of the literature, see Weick (1969), Sherif (1967), and Argyle (1970). This paper is designed to highlight some issues underplayed in these more thorough reviews.

spends gazing into one another's eyes as observed by a judge behind a one-way mirror (Rubin, 1970). In one experimental setting, "aggression" (Zimbardo, 1969) and, in another setting, "obedience" (Milgram, 1965) are both inferred from the pressing of a button to deliver an electric shock to another person.

This practice of operationalization of a general principle by a specific and/or analogous case is based on the questionable positivist vision that all the bits of social interaction observed in a controlled manner in many studies can be added together at some point to explain in a more comprehensive way more complex phenomena. The unattainability of this ideal is powerfully illustrated by Milgram and Stotland's (1973) recent Promethean attempt to assess the social modelling effects of television violence on viewers' violence; at many points in the design of these expensive studies, experimental operationalizations were made which dramatically limited the range of real-world phenomena of relevance. It becomes clear in reading about their work that an almost infinite number of studies would be necessary to answer the most simply stated questions about basic human interrelations and about issues demanding social policy decisions.

The set of studies by Milgram and Stotland (1973) is an example of a middle category mentioned above on the dimension; Lab-in-the-field; other experiments involve reactions to staged shoplifting, heart attacks on the street, and so on. It is this genre of social science investigations which pose the most difficult ethical questions for the practice of deception in social psychology.

At the far extreme of this dimension is Field research; or natural observation of naturally-occurring phenomena. The field setting is unpopular among psychologists because it takes so much more time, and does not have the controls of the lab. Interestingly, the observer is considered an intruder in the field while the experimenter in the lab is only sometimes considered an influence, and in this case as another quantifiable variable (in terms of sex, race, and age). However, much recent attention has been directed toward the large set of undesirable artifacts operating in the lab setting (cf. the integrative paper by Rosnow and Aiken, 1973).

Another more promising middle category is Field-in-the-lab, an

attempt to combine the benefits of each setting in, for example, the observation of small group processes where a comfortable room serves both as the location for the natural process of a small group and allows observers to learn the art of observation (Bales, 1970).

Output. A second dimension of great importance is the form of output of interest. Most fundamental is the definition of the unit of behavior observed. Some investigators score units in terms of the number of seconds a particular behavior has taken, some in terms of whether or not it has occurred in a particular time interval, some in terms of arbitrary cut-off points for duration. In the simplest measure of verbal interaction -- "Who speaks to whom?" -- Bales (1950, 1970) used the third convention for behavior which tends to be unobtrusive but continuous: such a behavior occurring longer than fifteen seconds gets scored again and so on for every fifteen seconds thereafter (also Aries, 1974; cf. Tresemer, 1974). Another kind of arbitrary cutoff in this third convention is used by Bales' Interaction Process Analysis (1950); a "unit" is "a single simple sentence expressing or conveying a complete simple thought" (p. 37). There is the idea behind this that one declarative sentence takes about as much time as another. Finally, some investigators use a fourth convention: they seem to ignore time altogether, paying attention solely to the quality of what is going on. An example of this last orientation is Mann's (1967) member-leader scoring system for small gorups. Here, one "act" is any consistent form of behavior, whether half a second long or five minutes long. The "act" ends and a new one begins as soon as the kind of behavior changes.

Each of these conventions concerning the "units" of social interactive behavior carries important consequences for how the data will look. Like cartographers of a complex many-dimensional reality, we have the choice between several different sorts of projections of data (ranging from Mercator to Buckminster Fuller's tetrahedral world to a pear-shaped globe), each of which has its peculiar distortions and specialized uses. As anyone knows who has learned a "system" for "seeing" and "hearing" social phenomena, none of these is necessarily better than any other; the criterion for choice of a system is that it fits the needs of the investigation.

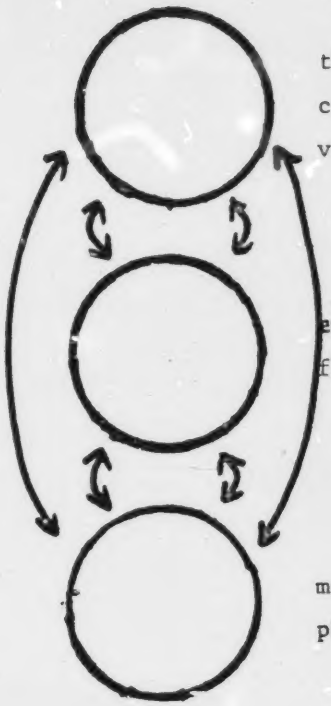
The content of interaction. A model borrowed from Gurdjieff (cf. Ouspensky, 1949, 1969) conceives of Man as a three-centered being, behavior occurring at 1.) a thinking or cognitive level, 2.) an emotional or feeling level, and 3.) a motoric or physical level (cf. Figure 1). The "meaning" of a social event is felt at each of these three levels and is different at each, a point which needs to be stressed. Starting with a gross example, a punch in the jaw leads to a bodily reaction and perhaps a physical memory stored in tight muscles. It also is expressed on an emotional level as some combination of fear and anger related to earlier emotional experiences. Finally, the intellectual level begins the process of matching this experience with verbalized concepts and ideas about violence, deciding what one "should" do in such a situation given all the factors perceived and registered in the brain, and so on. Thus the social interactive behavior that follows a punch in the jaw should be understood in terms of all of these levels of interaction.

Research normally, however, focuses on one level only. Some researchers concentrate on the motoric level: e.g., body language (kinesics) and use of personal space (proxemics). Most research concentrates on the thinking level, the province of attitudes. Little work is done integrating two or three levels, or on the emotional level in general. For example, while Rubin's (1970) work on romantic love integrated attitudes (thinking level) and "mutual gazing" (motoric level), there was no integration of the emotional level of romantic love, an unfortunate exclusion. Rubin should not be singled out in this regard; the emotional realm has stimulated very few observational systems outside of psychoanalytic theory. An exception is Argyris' (1969, 1974) scoring system for social interaction, where ideas and feeling are both objects of observation (of course, in this case, leaving out the motoric level of observation).*

Another reason for the primary research attention given to the first (cognitive) and third (kinesic) levels is that they lend themselves in general to a nomothetic scientific approach, that is, toward the formulation of abstract and recurrent universals, leading to general statements

* Mehrabian (1972) has begun a line of theory and research which promises to integrate these levels most effectively.

Figure 1. Three levels of the content of social interaction.



Level	Associated Unit Emphasis
thinking	duration
cognitive	verbal structure
verbal	
emotional	intensity
feeling	power
motoric	configuration
physical	rhythm

and scientific laws. In general, the emotional (second) level necessitates the contrasting scientific approach, namely the idiographic, where the focus is on the concrete, individual, or unique, and its determinants through personal historical experience (Nagel, 1961). As a consequence, it is often ignored in theories and methods emphasizing group phenomena. But some would even say that social interaction occurs in an emotionally charged field (Weinstein and Platt, 1973; e.g., also Slater, 1966), making this exclusion quite serious. In any case, all these factors are conjointly involved in social interaction, and to disregard any level naturally restricts the meaningfulness of the picture. An integration of levels requires a combination of the idiosyncratic and the general, the historical and the ahistorical.

It is interesting to note that the definition of unit of output, and indeed the language of social science, differs depending on the level of social interaction concentrated upon (cf. Figure 1). Configuration and rhythm are observed at the physical level, as in kinesiology or so-called "body language". Intensity and power are observed at the emotional level, giving much less attention to time and space; an expletive (or "expletive deleted") has much greater stimulus intensity and is interpreted as the expression of a feeling (rather than a straightforward thought). Finally, actual duration and structure (grammatical and interpersonal) are emphasized at the intellectual level.

Scope. A fourth dimension more explicitly represents the research decisions of individual social scientists than the previous space and time dimensions. This involves the scope of an observational system. Our attention will be concentrated on the variability in scope of systemic studies.*

Observation can involve specificity and detailed description, as in Jules Henry's (1965) and Laing and Esterson's (1964) exceedingly meticulous accounts of the minutiae of interaction in schizophrenogenic families. Or observation can involve interpretations of behavior, as in Goffman's (1967) analysis of ritual in social behavior or Dicks' (1967) superb analyses of the relationships of married couples.

The most highly developed form of the latter extreme is psychoanalytic theory. Many, fleeing the presumed excesses of this enlarged scope of observation in favor of a "real science" where the observer as biased interpreter is absent and where "the data speak for themselves," find out with a shock that value-based decisions are involved here too. The judgment that an infant is crying rather than vocalizing, or crying rather than not behaving (as in Lewis, 1972), is very difficult to make. Thus interpretive statements need not be rejected because they are a priori assumed to be unscientific, far less reliable, less grounded in "fact".**

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* This skips the most common decision concerning scope: namely the choice of a simple variable for study (e.g., mother-child gazing), a set of variables, or the profile of an entire system. Despite the prevalence of the first type, several recent sources strongly suggest that multivariate measurement is far superior to a great many research efforts measuring single effects of situations (cf. Jaccard, 1974).

** Flight from low-statistical reliability into questionnaire research on social interaction may increase reliability on paper, but the research may suffer from lack of relationship with the behavior of interest. Questionnaire responses are highly mediated by dynamics at the thinking level and as such are limited measures of social interaction. It is important to remember that statistical methods as we use them were derived by agricultural botanists. and pervasive remnants of this influence still exist. It is far easier to grade the amount of yield of a corn plant than to so discern and quantify the crucial factors in social interaction. Meeting statistical criteria for the valid use of statistical tests, while commonly considered essential, is not utterly necessary for meaningful research in this field.

Scope is closely related to the time alloted to units. This can range from milliseconds -- one kinesiologist has spent years studying four seconds of filmed interaction between two people slowed down to tiny intervals -- to the social worker's description of the profile of social interaction in a family after months of observation. The two extremes necessarily require different languages.

An omnibus system recently developed by Bales and Cohen (1973) integrates many levels of the scope dimension. It is entitled Systematic Multiple Level Observation of Groups (or SYMLOG), and involves a set of compromises between, on the one hand, the greater richness and lower reliability of interpretive observations of large scope and, on the other hand, the narrower applicability and greater reliability of specific observations of small scope. About one observation is made each minute by each observer, clearly a compromise with the various outputs of the other systems mentioned earlier.

SYMLOG is theoretically grounded in what are believed to be universal dimensions of interaction: 1.) domination vs. submission, 2.) friendliness and affiliation vs. unfriendliness and hostility, and 3.) task-orientation and work vs. anti-task-orientation and expression (Bales, 1970; Dunphy, 1972). SYMLOG further differentiates between eight levels on which combinations of these kinds of interaction can be expressed. Briefly, these are comments about the general situation, facts about the actor's own general background, descriptions of persons, general value statements about how things should be, more specific suggestions for group norms, verbal interaction which communicates the actor's feelings toward another, non-verbal behavior, and fantasy images. The following is an example of an observation of a social-interactive event:

AS 19 10 John to Jack, NON PF, group task (blackboard)

This would be translated as follows: the observer Anne Smith (AS), on the 19th day of the month and ten minutes after the hour, observed the group member John behave toward Jack; this was a non-verbal gesture (NON) of a friendly (P for positive) and task-oriented (F for forward; from Bales, 1970) nature; the last phrase reminds the observer that this was a gesture toward the blackboard facilitating the group task at that time.

This one example is intended to suggest that SYMLOG is capable of observation at cognitive (verbal), emotional, and motoric levels. Simultaneous observation at all three levels and their interaction has not yet been developed. But this system offers a rare synthesis along the crucial content dimension.

The interscorer reliability of this system is relatively low in comparison to other systems. But it offers a tool for comparing observers' biases, and is thus invaluable in the training of observation. It can also be used as feedback to the group about the different interaction profiles of different group members and is thus useful if one of the group goals is self-analysis. These are the trade-offs of this method for observation of social interaction, and illustrate the final point of the paper -- the greater importance of specifying and fulfilling the objectives for a method of observing social interaction than in maximizing the numerical values of customary indices of reliability of an observational system.

The uses of research. Several dimensions offered here provide bases for choice in research on social interaction. The guiding question in this choice should be "Who wants to know and what do they want to know?" The current enthusiasm for social indicators makes the development of sophistication in this area most timely. Schools, businesses, special settings such as prisons, housing projects, or encounter groups, and even whole cities, all desire to create certain "climates" allowing for most effective realization of institutional goals. These "climates" or "ecosystems" can be characterized by certain optimum profiles of social interaction (Newman, 1972). The scope, content, and output of the measures of these profiles of social interaction must be designed with the unique needs of the target system and setting in mind. For example, one researcher concentrated on the ability of school teachers to turn around from writing something on the blackboard and correctly identify and reprimand the source of classroom disturbance, and not making the mistake of pinpointing one of the students to whom the disruptive behavior had spread. This capacity to see behind oneself (which the researcher called "with-it-ness") was a social interactive behavior of great practical importance, and central to the students' regard of the teacher (and their subsequent output in that class). Indeed, actual

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behavior in social settings often turns out to be a far more informative indicator of the outcome variables of interest than data from questionnaires.

Maintaining perspective. A final virtue of any system for observing social interaction is its adaptability to special needs and situations. Those using a system must be willing to revise, amend, and delete as it serves their needs (and, of course, to agree to be explicit about this fact in reports of their work). Paul Valery has said: "To see, one must forget the name of what one sees." It is just this sort of ability to step back occasionally from the object being observed and to ignore its label that allows the observer to understand more clearly and intimately what is actually going on. In this way, we will begin to create systems for the observation of social interaction that are increasingly successful in solving the problems that require solution.

REFERENCES

Argyle, M. Social interaction. Chicago: Aldine, 1970.

Argyris, C. The incompleteness of social-psychological theory: examples from small group, cognitive consistency, and attribution research. American Psychologist, 1969, 24, 893-908.

Argyris, C. Alternative schools: a behavioral analysis. Teachers College Record, 1974, 75, 429-452.

Bales, R. F. Interaction Process Analysis: a method for the study of small groups. Reading, Mass.: Addison-Wesley, 1950.

Bales, R. F. Personality and interpersonal behavior. New York: Holt Rinehart and Winston, 1970.

Bales, R. F., and S. P. Cohen Systematic Multiple Level Observation of Groups (SYMLOG). Unpublished manuscript, Harvard University, 1973.

Dicks, H. V. Marital tensions: clinical studies towards a psychological theory of interaction. New York: Basic, 1967.

Dunphy, D. The primary group. New York: Appleton-Century-Crofts, 1972.

Goffman, E. Interaction ritual. Garden City, New York: Anchor, 1967.

Henry, J. Pathways to madness. New York: Random, 1965.

Jaccard, J. J. Predicting social behavior from personality traits. Journal of Research in Personality, 1974, 7, 358-367.

Laing, R. D., and A. Esterson Sanity, madness and the family. London: Tavistock, 1964.

Lewis, M. State as an infant-environment interaction: an analysis of mother-infant interaction as a function of sex. Merril-Palmer Quarterly, 1972, 18, 95-121.

Mann, R. D. Interpersonal styles and group development. New York: Wiley, 1967.

Mehrabian, A. Nonverbal communication. Chicago: Aldine, 1972.

Milgram, S. Some conditions of obedience and disobedience to authority. Human Relations, 1965, 18, 57-76.

Milgram, S. and Stotland, R. L. Television and antisocial behavior. New York: Academic, 1973.

Nagel, E. The structure of science: problems in the logic of scientific explanation. New York: Harcourt Brace and World, 1961.

Newman, P. R. The school: a psycho-social ecosystem. Educational Horizons, 1972, 51, 59-64.

Ouspensky, P. D. In search of the miraculous. New York: Harcourt, Brace and World, 1949.

Ouspensky, P. D. The psychology of man's possible evolution. New York: Knopf, 1969.

Rubin, S. Measurement of romantic love. Journal of Personality and Social Psychology, 1970, 16, 265-273.

Sherif, M. Social interaction: process and products. Chicago: Aldine, 1967.

Slater, P.E. Microcosm: structural, psychological, and religious evolution in groups. New York: Wiley, 1966.

Tresemer, D. Small groups. In P.J. O'Connell (Ed.) The study of society. Guilford, Conn.: Dushkin, 1974, 244-269.

Weick, K.E. Systematic observational methods. In G. Lindzey and E. Aronson (Eds.) Handbook of social psychology (2nd ed.), Volume 2. Reading, Mass.: Addison-Wesley, 1969, 357-451.

Weinstein, F., and Platt, G.M. Psychoanalytic sociology: an essay on the interpretation of historical data and the phenomena of collective behavior. Baltimore: Johns Hopkins, 1973.

Zimbardo, P. G. The human choice: individuation, reason, and order versus deindividuation, impulse, and chaos. In W. J. Arnold and D. Levine (Eds.) Nebraska symposium on motivation. Lincoln: University of Nebraska Press, 1969.

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Aries, E. Interaction patterns and themes of male, female, and mixed groups. Paper presented at American Psychological Association meetings, New Orleans, September, 1974.